

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1855.1052005	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 01/03537	International filing date (day/month/year) 02/02/2001	(Earliest) Priority Date (day/month/year) 03/02/2000
Applicant: MILLENNIUM PHARMACEUTICALS, INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 5 sheets.
☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- ☒ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☒ furnished subsequently to this Authority in computer readable form.
- ☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application, as filed has been furnished.
- ☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☒ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant.
- ☐ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- ☐ None of the figures.

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A. CLASSIFICATION OF SUBJECT MATTER					
IPC 7	C12N15/62	C07K16/28	C07K16/46	C12N15/13	C12N15/63
	C12N5/10	A61K39/395	A61P9/10	A61P19/02	A61P31/18
	A61P37/06				

According to International Patent Classification (IPC) or to both national classification and IPC

Minimum documentation searched (classification system followed by classification symbols):

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EMBASE, CHEM ABS Data, WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 97 31949 A (PHARMACIA & UPJOHN SA ET AL.) 4 September 1997 (1997-09-04) page 8, line 27 -page 11, line 8 discussion claims	1-101
Y	WO 91 09967 A (CELLTECH LTD.) 11 July 1991 (1991-07-11) the whole document	1-101

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

A document defining the general state of the art which is not considered to be of particular relevance

"F" earlier document but published on or after the international filing date

document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

'O' document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

*T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.

*X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

*& document member of the same patent family

Date of the actual completion of the international search

13 June 2001

Date of mailing of the international search report

28/06/2001

Name and mailing address of the ISA
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International Application No.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	J. FRADE ET AL.: "The amino-terminal domain of the CCR2 chemokine receptor acts as coreceptor for HIV-1 infection." JOURNAL OF CLINICAL INVESTIGATION, vol. 100, no. 3, 1 August 1997 (1997-08-01), pages 497-502, XP002099012 New York, NY, USA the whole document	1-101
A	I. SANZ ET AL.: "VH sequence of a human anti-Sm autoantibody. Evidence that autoantibodies can be unmutated copies of germline genes." THE JOURNAL OF IMMUNOLOGY, vol. 142, no. 3, 1 February 1989 (1989-02-01), pages 883-887, XP002168811 Baltimore, MD, USA cited in the application abstract figure 3	14, 21, 82
A	P. CHASTAGNER ET AL.: "Cloning of a gene encoding a lupus-associated human autoantibody Vk region using the polymerase chain reaction and degenerate primers." GENE, vol. 101, no. 2, 30 May 1991 (1991-05-30), pages 305-306, XP002168812 Amsterdam, NL cited in the application abstract figure 1	13, 16, 82
A	C. CHOTHIA ET AL.: "Conformations of immunoglobulin hypervariable regions." NATURE, vol. 342, 21 December 1989 (1989-12-21), pages 877-883, XP002030586 London, GB cited in the application the whole document	1-17, 28, 61-67, 82-91, 98, 99
P, X	WO 00 05265 A (LEUKOSITE, INC.) 3 February 2000 (2000-02-03) page 17, line 23 -page 20, line 33 examples claims	1-101

FURTHER INFORMATION CONTINUED FROM PCT/SA/ 210

Continuation of Box I.1

Although claims 47, 48, 51-56, 67-81, 94, 96 and 97 (all completely) and claims 41-46, 49, 50, 93 and 95 (all partially, as far as an in vivo method is concerned) are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest:

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

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Information on patent family members

International Application No.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9731949	A	04-09-1997	AU 724037 B	07-09-2000
			AU 2110497 A	16-09-1997
			EP 0914345 A	12-05-1999
			JP 2000510685 T	22-08-2000
			US 6084075 A	04-07-2000
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			AU 664801 B	30-11-1995
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			AU 646009 B	03-02-1994
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			AU 7048691 A	24-07-1991
			BG 60462 B	28-04-1995
			BR 9007197 A	28-01-1992
			CA 2037607 A	07-09-1992
			CA 2046904 A	22-06-1991
			CA 2050479 A, C	22-06-1991
			DE 69020544 D	03-08-1995
			DE 69020544 T	18-01-1996
			DE 69022982 D	16-11-1995
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			DE 69031591 D	20-11-1997
			DE 69031591 T	12-03-1998
			DK 460167 T	20-11-1995
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			EP 0460167 A	11-12-1991
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			GB 2268744 A, B	19-01-1994
			GB 2268745 A, B	19-01-1994
			GR 3017734 T	31-01-1996
			GR 3025781 T	31-03-1998
			HU 58372 A	28-02-1992
			HU 215383 B	28-03-2000
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			HU 58824 A, B	30-03-1992
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			EP 1098908 A	16-05-2001